

THAT WHICH IS CLAIMED IS:

1. A fiber optic splice component comprising:

a ferrule having a passageway extending from a first end to a second end thereof for receiving an optical fiber inserted from each end and having an opening between the first and second ends in communication with the passageway;

a housing, the housing configured to hold the ferrule therein; and

at least one electrode disposed in the housing and adjacent to the opening in the ferrule for fusion splicing the optical fibers.
2. The fiber optic splice component of claim 1 further comprising a protection element to seal the fusion spliced optical fibers.
3. The fiber optic splice component of claim 1 wherein the protection element is a heat shrink element.
4. The fiber optic splice component of claim 1 further comprising a strain relief element disposed in the housing.
5. The fiber optic splice component of claim 1 further comprising a lead-in portion adjacent one of the first end and the second end to guide the optical fibers into the passageway.

6. The fiber optic splice component of claim 1 further comprising a strain relief element disposed in the housing and a lead-in portion adjacent one of the first end and the second end and disposed in the strain relief element.

7. The fiber optic splice component of claim 1 further comprising a lead-in portion in the ferrule at each of the first end and the second end.

8. A ferrule adapted for use in a fiber optic splice component comprising:
a body having a first end and a second end, the body having a lead-in portion at the first end and at the second end;
a passageway extending from the first end to the second end of the body to position an optical fiber inserted from each end; and
an opening disposed between the first and second ends in communication with the passageway to splice the optical fibers together.

9. A method for splicing two optical fibers together in a fiber optic splice component comprising:

providing the fiber optic splice component, the fiber optic splice component comprising a ferrule having a passageway extending from a first end to a second end to position an optical fiber inserted from each end and having an opening between the first and second ends in communication with the passageway, a housing, and at least one electrode disposed in the housing adjacent to the opening in the ferrule for fusion splicing the optical fibers;

inserting the optical fibers into respective ends of the fiber optic splice component;

initiating a fiber optic splice machine, the splice machine:

applying a voltage to the electrodes to cause an arc to be generated across the opening of the ferrule thereby fusing the optical fibers; and

heating a splice protection element disposed in the housing to melt and form around the fused optical fibers.

10. The method for splicing two optical fibers in a fiber optic splice component of claim 9, wherein the applying and heating steps are initiated simultaneously.

11. The method for splicing two optical fibers in a fiber optic splice component of claim 9, wherein the applying and heating steps are initiated in series.

12. The method for splicing two optical fibers in a fiber optic splice component of claim 9, wherein the applying step is initiated before the heating step.

13. The method for splicing two optical fibers in a fiber optic splice component of claim 9, wherein only one of the applying step and the heating step are performed upon initiating the fiber optic splice machine.

14. The method for splicing two optical fibers in a fiber optic splice component of claim 9, wherein the fiber optic splice machine has a base portion and a top portion, and wherein the top portion closes on the base portion to initiate the fiber optic splice machine.

15. The method for splicing two optical fibers in a fiber optic splice component of claim 9, wherein the inserting step includes inserting the optical fibers into the opening and into physical engagement with one another.
16. The method for splicing two optical fibers in a fiber optic splice component of claim 9, wherein the inserting step includes inserting at least one optical fiber into a clamping mechanism and wherein the fiber optic splice machine further performs causing the clamping mechanism to move the at least one optical fiber into the opening for fusing the optical fibers.
17. The method for splicing two optical fibers in a fiber optic splice component of claim 16, wherein the clamping mechanism is spring driven.
18. The method for splicing two optical fibers in a fiber optic splice component of claim 16, wherein the clamping mechanism is piezo driven.
19. A fiber optic splice machine comprising:
a base portion, the base portion comprising:
a fiber optic splice holder for holding a portion of a fiber optic splice component;
electrical contacts adjacent the fiber optic splice holder and in communication with an arc generator; and
a heating element disposed under the fiber optic splice holder; and

• a top portion for covering the base portion and configured to hold a top portion of the fiber optic splice component.

20. The fiber optic splice machine of claim 19, further comprising a battery to energize the arc generator and the heating element.